9: O'Neale & Dolores E, I-4 (no date) 1943
NU28 Papago NU28
600

VOL. 45 JULY-SEPTEMBER, 1943 NO. 3, PART 1

AMERICAN ANTHROPOLOGIST

New Series

Organ of the American Anthropological Association, the American Ethnological Society, the Anthropological Society of Washington, and the Philadelphia Anthropological Society

CONTENTS

Energy and the Evolution of Culture. LESLIE A. WHITE..... 335

The General Problem of Hopi Adjustment. DOROTHY EGGAN..... 357

A Reconsideration of the Natchez Social Structure. C. W. M. HART..... 374

Notes on Papago Color Designations. LILA M. O'NEALE and JUAN DOLORES..... 387

The Social Use of Kinship Terms Among Brazilian Indians. CLAUDE LEVI STRAUSS..... 398

Linguistic Aspects of Yaqui Acculturation. EDWARD H. SPICER..... 410

A Clear Case of Linguistic Acculturation. JEAN BASSETT JOHNSON..... 427

The Linguistic Aspect of Wintu Acculturation. D. D. LEE..... 435

Bronislaw Malinowski. GEORGE PETER MURDOCK..... 441

Edgar Billings Howard. FRANK H. H. ROBERTS, JR..... 452

BOOK REVIEWS.....*See rear cover*

SOME NEW PUBLICATIONS..... 481

BRIEF COMMUNICATIONS.....*See rear cover*

NOTES AND NEWS..... 494

[title page]

Published by the

AMERICAN ANTHROPOLOGICAL ASSOCIATION

9: O'Neale & Dolores E, I-4 (no date) 1943
NU28 Papago NU28

NOTES ON PAPAGO COLOR DESIGNATIONS

By LILA M. O'NEALE AND JUAN DOLORES

000 FROM the thousands of printed pages on the subject of color in its various aspects, and the seemingly limitless number of intergradations of hues made possible through continued advancements in dyeing and printing, three simple facts emerge: each hue has a name; each is light or dark; and each is pure or dull.

Modern industries have inundated us with logical and fantastic color names, but most of them can be exchanged for those which indicate with reasonable accuracy the relative amounts of the primary and secondary colors: red, yellow, blue, orange, green, and purple. A familiar color chart used by many students contains eighteen hues. Each hue may be represented by any one of its values ranging from tints so light that they approach white to shades so dark that they approach black. The light-to-dark scale is usually shown in five or seven steps. Each tint or shade of any color may, in turn, be full strength, pure, or it may be dull, approximating neutral gray in which none of the original color is present. The purity, saturation, or intensity scale is also shown in steps, usually nine.

822 151 Notes on the color designations in use among a people who have had no incentives to decorate their houses, to attract attention through advertising, or to exercise personal choice in assembling garments for a variety of social demands, are automatically reduced to comparatively simple terms. The Papago list of designations represents a limited color range. Specific words for whole groups like the blues and purples are lacking, as may be seen by the schematic chart. Nothing in the desert region furnishes dyes for such colors, although it is evident that one native word suffices to cover analogous hues as in the case of some blues, greens, and grays. Under such circumstances the color designation is not confused in the speaker's mind with the actual color of the object. Both he and his Papago listener know what possibilities and extensions of a literal meaning are incorporated in the name. This statement can be completely understood only through knowledge of the language.

822 Because natural sources for colors and uses for pigments are limited among the Papago, there is a conspicuous lack of illustrations for certain concepts which have developed and attached themselves to many of our standard colors, and have added significance to them. Symbolic meanings are only one phase of this significance. Colors are frequently referred to as warm or cool, advancing or retreating, heavy or light, attractive or ugly, sombre, youthful, dramatic, gay, and the like. The Papago do not endow the colors around them with comparable attributes. Even their comment upon a beautiful field or vista may or may not have to do with its actual coloring. A "beautiful country" (*skeke tcewe'*T) is also a "good country." The expression implies that an abundance of rain has resulted in plenty, fruitfulness, and the comment is made in appreciа-

9: O'Neale & Dolores E, 1-4 (no date) 1943
NU28 Papago NU28

PAPAGO COLOR DESIGNATIONS

	"Almost"	Hue Name	"Very"	"Very Dark"
White	cahstoha	toha	sihstoha	
Black	cahstcu'ĸi[1]	tcu'ĸi	sihstcu'ĸi	
Muddy	cahsepitema'ĸi	pi'tema'ĸi	sihsepitema'ĸi	stcu'kema spitema'ĸi
Gray	cahskoma'ĸi	koma'ĸi[2]	sihskoma'ĸi	
Greenish Gray		stcete'kime skoma'ĸi[3]		
Gray (of hair)		skaima'ĸi		
Gray (of hair)		smohta'ĸi		
Ashen	cahsemahtaima'ĸi	mahtaima'ĸi[4]	sihsemahtaima'ĸi	
Smoky	cahskupe'tuhvi	kupe'tcuhvi	sihskupe'tuhvi	
Greasy[5]	cahsmuhța'ĸi	muhata'ĸi	sihsmuhța'ĸi	stcu'kema smuhța'ĸi
Red	cahswe'ĸi; swe'kuuĸi[6]	we'ĸi[7]	sihswe'ĸi	stcu'kema swe'ĸi[8]
Yellowish Red		sosmma swe'ĸi[9]		
Yellow	cahsoaĸi[10]	oaĸi[11]	sihsoaĸi[12]	
Green	cahstceta'ĸi[13]	stceta'ĸi[14]	sihstceta'ĸi[15]	stcu'kema stceta'ĸi[16]
Grayish Green		skoma'kime stceta'ĸi[17]		
Papaĝo Color[18]	cahsipaima'ĸi	ipaima'ĸi	sihsipaima'ĸi	

Several of the Papago color designations represent hues recognisable by names in familiar usage; others approximate hues shown in Milton Bradley's *Studio Book of Colored Papers*.

1. Similar to dark greenish-brown.
2. Similar to very light khaki; also to very light turquoise green.
3. Approximately yellow-green, Tint no. 2.
4. Approximately neutral gray, no. 2.
5. Similar to drab or fawn; approximately yellow-orange (dark).
6. Approximately red, Tint no. 2, and orange-red, Tint no. 2.
7. Approximately medium red.
8. Approximately red, Shade nos. 1 and 2.
9. Approximately orange-red, Tint no. 1; similar to scarlet.
10. Approximately yellow, Tint no. 2, and yellow-orange, Tint no. 2.
11. Approximately medium yellow-orange, and medium orange.
12. Approximately yellow-orange, Shade no. 2.
13. Approximately green, Tint no. 2, and blue, Tint no. 1.
14. Approximately green, Tint no. 1; yellow-green, Shade no. 2, and medium blue.
15. Approximately medium green.
16. Similar to bottle green.
17. Approximately green-blue, Shade no. 1.
18. Similar to crimson.

tion of that fact. Cultivated flowers in a desert land are colorful by contrast with their surroundings, but they may have been planted because they represented something rare, or were an achievement in gardening rather than because they in themselves were beautiful in the accepted sense of the word. Without doubt such opinions are open to argument, but there are available analogies to warrant recognition of the less-frequently expressed point of view.

Although classifying a color as unattractive is solely dependent upon personal tastes, our so-called muddy browns do appear to be in that category with

9: O'Neale & Dolores E, I-4 (no date) 1943
NU28 Papago NU28

some justification. To the Papago three hues seem less attractive than others: greasy color (*muhata'*KI), smoky color (*kupi'icuh*VI), and muddy color (*pi'te'-ma'*KI). However, even this reaction may have little to do with the actual colors. If these three hues develop in the firing of pottery, they are indicative of unsuccessful results. It is probable that the distaste for greasy, smoky and muddy colors is based as much upon the partial failure of the women's efforts as upon the colors themselves. In appearance they are dull, and in some of their dark values they are similar enough to make identification difficult.

Several descriptive words suggesting colors are not included in the compiled list although they are used by some Papago who have a more extensive vocabulary than others. In ordinary conversation use of such descriptive words is recognised as figurative rather than literal. Obviously, there is no such color as sour color, although the first horse owned by Dolores was named *e'e'*KE*'icuh*, the Sour One, by his father. To interpret the Indian phrase one must understand that the horse's color was like the color of *ipahi* fruit before it turns red, a hue similar to one of the several grays which the Papago call *siceta'*KI, green. This color suggested to Dolores' father the sourness of the unripe fruit, hence the name.

The parts of the body which are always covered are lighter than the exposed portions, a difference which is no less noticeable among Indians than among peoples with white skins. This lighter portion of the body is said to be *smah-ceva'*KE from the verb *smahs*, to be in sight or visible; to be seen.

Two other descriptive words are related to color designations although the words in themselves imply no specific colors. One is *seicelsewe'*KI. This word seems to have no synonym in English. Perhaps dappled contains a similar meaning. The word describes the appearance given to a surface by markings of color. A rattlesnake is *seicelcewe'*KI, because of the combination of its diamond markings and spotted coloring. A mountain turtle is likewise *seicelcewe'*KI There is obviously some connection between *seicelcewe'*KI and *seicelce'*KI which means full of holes or open spaces (a word applied, also, to a country without trees). *seicelcewe'*KI like *valihsah* (the Papago rendition of a Spanish word) might grammatically be used with any color except for the fact that there are very few instances when its use is appropriate. Black and red are used with *seicelcewe'*KI, but other combinations seem foolish to the Papago.

Another descriptive word is *sipanima'*KI. Cloth with an allover repetition of small design units is described as dotted, or spotted. The Papago word comes from *sipani*, falling in drops like a liquid. *sipanima'*KI suggests the appearance of dusty ground after a very light shower. No color is implied, hence one must be added to make the description complete, as *swe'pe'kime sipanima'*KE, red spotted, or *sicu'kema sipanima'*KE, black spotted, etc.

Dolores' list of color designations contains about three dozen names counting the neutrals: blacks, whites, and the grays. The identification of specific

9: O'Neale & Dolores E, I-4 (no date) 1943
NU28 Papago NU28

822 192 colors with their familiar names was facilitated by the use of colored papers.[1] Translations of most of the native words require the qualifying adverbs "almost" or "very", or the phrase "very much." The Papago prefixes *cah-* and *sih-* indicate a relationship between the hue determined upon to represent the color designation and similar colors which are compared to it. Theoretically, these latter belong to the same color group, i.e., they warrant the use of the same color designation. Judging from the evidence gathered, there is no implied differentiation in the term "almost" between a degree of relationship based upon value and one based upon purity. For example, *oa*ME is yellow, and *cahsoa*ME is almost yellow, but whether the latter is almost as dark as the color determined upon as *oa*ME, or almost as full strength (pure) as *oa*ME, is neither implied by the adverb, nor shown by the several colored papers chosen to identify the tints to which *cahsoa*ME was applicable (chart 1). Some of these tints were almost pure light yellows, and some were dull light yellows. They were all, however, high on the value scale. By contrast with commercial dyes natural dyes are usually more or less grayed or dull, yet there are appreciable differences in brightness among them.

But although the word *cahsoa*ME may be applied to any one of several light tints of yellow, pure or dull, *sihsoa*ME, very yellow, indicates more definitely a relationship involving brightness or purity of color as well as value. The choices of colored papers identifying "very" yellow, "very" green, etc., proved this. Dolores' remembered reactions connected with the first purchased dress materials to appear on the Reservation are additional evidence.

822 386 Really bright colors were unknown among the Papago. Color mixtures are still used just as made, without attempts to modify by blending two or more together. It is true some colors do change while undergoing various treatments, as for example, the yellow of buckskin, which may become reddish during the tanning processes, but the change is due to the condition of the materials used rather than to intentions. The dyes and paints used by the women basket makers and potters are few in number and without strong contrasts. Even accidental color arrangements can hardly escape being harmonious. Pottery has black, or black and red patterns, on natural buff-colored clay. The question of which colors should be used or where they should be distributed could never have been very insistent.

177 391 822 The first European costumes to be adopted by the Papago women seem to have been conservative. They had full skirts with ruffles at the lower edges, usually made of light or white materials with small designs (calicoes). The Pima and the Mohave women dressed differently. The Pima at first bought yardage to wind around their waists sarong-fashion. Later they, too, made full skirts. The materials they bought were dyed in crude colors, and the

[1] Milton Bradley's *Studio Book of Colored Papers* (Springfield, Massachusetts). Each of the 18 hues appears in five value steps: two tints, middle value, and two shades. Since many of the Bradley papers are too bright, it was necessary to find some examples among duller papers.

9: O'Neale & Dolores E, I-4 (no date) 1943
NU28 Papago NU28

women's inexperience in combining them showed in the garish inharmonies. Their dresses were riots of violent contrasts. Bright red, green, and yellow skirts banded at the bottom with other colors equally bright served to identify the wearers as far away as they could be seen. The Papago were astonished at the quantities of strong colors used. Bright colors warrant the use of the adverb "very" in describing them. In such cases the prefix *sih-* means not the darkness or lightness of the color, but its purity.

Certain color names can be modified to indicate that the color is very dark. Since the modifier is formed of the Papago word for black (*tcu'*KE), the translations of *stcu'kema sewe'*KI and *stcu'kema stceta'*KI, *stcu'kema spi'tema'*KI, and *stuc'kema smuhata'*KI are equivalent to blackish red, blackish green, blackish muddy color, and blackish greasy color.[2] Obviously a modifier meaning blackish cannot be used with the remaining color designations on the list, whites, blacks, and grays, or with yellows which become browns upon darkening, or with *ipahi* color which is never dark.

Conventional uses of specific colors on objects in the everyday life of the Papago are almost totally lacking. Red and black are the "right" colors for the painted designs on the feathers and shafts of arrows, but the basketry and pottery seem not to offer analogous examples. There is, however, one occasion upon which four specific colors are required, and upon which they have special significance. These four colors, symbolizing the directions, differentiate the rain clouds in the Papago Rain ceremony:

NORTH: *skokema'*KI *tceva'*KI
gray clouds

WEST: *swe'pe'*KI *tceva'*KI — EAST: *siotak tceva'*KI
red clouds — white clouds

SOUTH: *spitema'*KI *tceva'*KI
muddy clouds

The color names for the clouds in the east and west need no explanation. The names for the southern and northern clouds derive from the Papago origin story. At the time of the flood, the rubbish that was carried along stopped in the south (*Va'kolik*WE). The flood waters went down in the north (*tcupin*,

[2] Certain differences in the spellings of the same word should be noted. In the main, the orthography and spellings correspond to those followed in two earlier papers by Dolores: *Papago Verb Stems* (University of California, Publications in American Archaeology and Ethnology 10, 1913), pp. 241–263; and *Papago Nominal Stems* (Sapir Series 20, 1923), pp. 19–31. Throughout the present notes green sometimes appears as *tceta'*KI, at other times as *stceta'*KI, red as *we'*KI and *swe*KI etc. The initial *s* is a formative element; the stem can be used with or without it.

Mountains and places with permanent names taken from colors use the stem without the *s*. East of Tucson is Little Yellow mountain, *alt oam to'o'*KE, a name merited by its appearance in the good years when poppies cover the slopes. Likewise Green mountain is *tceta'*KI *to'o'*KE and Green Well is *tceta'*KI *wahyuk*.

9: O'Neale & Dolores E, I-4 (no date) 1943
NU28 Papago NU28

773
821 from *tcupi*, to sink). The winds coming from the south were muddy color
822 because they had picked up the dust from the original rubbish heap. Even
823 today the annual wind storm, which always comes from the south, is sometimes spoken of as being *spi'tema'*KI.

822 Papago men of one village who are sent to invite people from outside vil-
202 lages to participate in the Rain ceremony paint their faces black to disguise themselves. The invitation is not proferred by one individual to another, but by a messenger who merely represents the village giving the ceremony. This messenger is called *wuhyo tcu'*KI, face black. The speaker in the Rain ceremony greets the invited guests upon their arrival. He is painted with the colors of the rain clouds, white, red, gray, and muddy color, and also carries a stick striped with the same colors. These four are used together only in connection with the Rain ceremony.

822 The use of white clay at a child's reception into the family after the purifi-
852 cation ceremony has also special meaning. The desert Papago use white clay,
773 but the Sonora Papago use a yellowish-white clay. Perhaps they lack the white variety, or possibly any light-colored clay is potent. The story of the first use of white clay as told among the desert Papago is as follows:

There was a place where water came out of the earth. The people did not know the reason, but the water ran out in increasing quantities. The situation grew dangerous. The people became more and more excited, but they did not know what to do. They sent out the medicine man. He said that the keeper of the sacred *vahcah*[3] had not been true to his teaching. The people decided to make an offering, the greatest one possible. They decided to make an offering of the keeper's two children. A four-cornered hole was dug, and the children were put in it. The children were told to dance while the older people sang. The men started to sing. The children danced. Water ran into the hole. The children kept on dancing. They did not look at the water. They were drowned. When the water went down, a layer of white clay remained. It was said to be the children. It was said to be good because the children were good and obeyed instructions. To this day the child that is given a taste of white clay will be good and obedient like the two sacrificed children.

822 The paragraphs to follow present brief descriptions of each of the colors to which a designation has been given. The order follows that given in the chart.

*White. cahstoh*A, almost white; *toh*A, white; *sihstoh*A, very white. The first and last colors are to be considered in their relation to the standard. *toh*A implies the lack of color; *cahstoh*A describes pale tints of any color even those that are more than a little tinged with color. It seems to mean whitish or off-white, color terms comparable to our blue-white, cream-white, oyster-white, and the like.

[3] *vahcah*, a long rectangular basket, not coiled, with a cover. In this are kept sacred objects such as Apache scalps, crystal rocks, and sticks tipped with down.

9: O'Neale & Dolores E, I-4 (no date) 1943
NU28 Papago NU28

When a Papago is a little lighter than the others, his complexion may be spoken of as white, not implying mixed blood, but only that his skin color by contrast with the usual dark skin is relatively light. [822]

*toh*A is also used to describe the change in appearance due to terror or panic: [827]

*alih elo'*TESi'TE'KE *sih tohah*

(The) child being frightened very much became white.

In such instances, the word is not used literally, but signifies that the skin color is unnatural.

The rain clouds in the east are white clouds, *siotah iceva'*KI.

*Black. cahstcu'*KE, almost black; *tcu'*KE, black; *sihstcu'*KE, very black. The blackest paint (*tcu'*KE) used by the Papago is made by rubbing a black rock on a harder rock. As with white, the designations are used to express relative degrees of darkness, but not necessarily the total absence of color. A very dark greenish-brown object was chosen to identify *cahstcu'*KE. The hair of a young girl is *stcu'*KE, but any of the three degrees of blackness may be used to describe the color of horses. [836]

There is no single Papago word for glossy, a surface appearance which seems to render blacks even blacker. A comparable meaning is conveyed by a phrase in which the horse is said to be *sva'ṭe'kame'swe'*KI (wet red) or *sva'ṭe'kame'stcu'*KE (wet black). *va'*KE, wet, combined with the color name indicates that the color shines or glistens as when a horse is coming out of the water.

Tucson, Arizona, takes its name from the Papago phrase *tcu'*KE *con*, black bottom. In times of high water there was once a small lake at the foot of the little peak west of the city. Rubbish washed down the sides, got caught in the lake, and decayed there. As the water gradually dried up, the black bottom was exposed.

*Muddy. cahsepitema'*KI, almost muddy color; *pi'tema'*KI, muddy color; *sihsepitema'*KI, very muddy color; *stcu'kema spi'tema'*KI, very dark muddy color. The raw clay used for making pottery is *pi'*T, although properly speaking *pi'*T is mud.

Muddy color must be interpreted with regard for its meaning in the sentence. The phrase "muddy-colored horse" may mean that its color is *spi'tema'*KI, or the phrase may mean that mud covers the horse giving it a temporary coloring. This difference in meaning is unmistakable to the Papago. [151]

The rain clouds in the south are muddy clouds, *spi'tema'*KI *iceva'*KI.

*Gray. cahskoma'*KI, almost gray; *koma'*KI, gray; *sihskoma'*KI, very gray; *stceṭe'kime skoma'*KI, gray-with-some-green-in-it (greenish-gray); and *smohta'*KI, the gray of hair. The earth, the sky, the ocean, and the distant mountains are spoken of either as *skoma'*KI (gray) or *stceta'*KI (green). One mountain is named Gray mountain, *koma'ki to'a'*KE, and an old place, now a village, is

9: O'Neale & Dolores E, I-4 (no date) 1943
NU28 Papago NU28

822 *koma'ki tcewe'*TE, Gray Earth. The arrow weed which grows along the river in the reservation is called *ko'koma'*KI *u'u'uhs*, gray sticks, by the Pima. At a certain time of the year it is said that the cold northern winds make one's face *skoma'*KI. A man is also *skoma'*KI when he has been out in the wind and the dust has gathered on him. The rain clouds in the north are *skokema'*KI *tceva'*KI.

822 827 There are four words used to describe gray or graying hair: *koma'*KI and *cahskoma'*KI, *skaima'*KI, and *smohta'*KI. The first two words apply to hair which is no longer black, and yet not wholly white. They may also be used in connection with other objects of similar color. At a certain stage of the hair turning white, the head looks to the Papago like ground cactus seeds, *kai'*TCI. The kernel is white, but the bits of crushed black shell in the mixture give the whole an appearance of gray, or *skaima'*KI.

*smohta'*KI describes gray hair in which there is more white than black. *mo'o* is the head or the hair on the head. Therefore, *smohta'*KI means graying hair on the head. The word is used only in this connection.

822 151 *Ashen. cahsemahtaima'*KI, almost the color of ashes; *mahtaima'*KI, ash color; *sihsemahtaima'*KI, very much the color of ashes.

Although this color is between white and gray, and *koma'*KI might be used for light gray, no Papago would fail to differentiate between *mahtaima'*KI and *koma'*KI. In every instance where he uses the first color designation he understands its meaning. The word is derived for *mahtai*, ashes. The term does not describe the actual color of an object, but its appearance when covered with ashes. If pots or clothes are heavily covered with ashes, the resultant grayness is *sihsemahtaima'*KI. The meaning of the sentence when these words are used is quite clear to the listener. There seems to be no object whose real color is termed ashen.

822 *Smoky. cahskupe'tuhvi*, almost smoky color; *kupe'tcuhvi*, smoky color; *sihskupe'tuhvi*, very smoky color. This color name describes those objects and utensils which are discolored by smoke. The word is also used to describe the color of pottery which has been subjected to uneven heat in the process of firing.

Greasy (corresponds to our brown). *cahmuhaṭa'*KI, almost greasy color; *muhaṭa'*KI, greasy color, *sihsmuhaṭa'*KI, very greasy color; *stcu'kema smuhaṭa'*KI, very dark greasy color. This color designation applies to hues like our drab and fawn. An object less brownish than one described as *smuhaṭa'*KI is called *cahsmuhaṭa'*KI; if more brownish, it is called *sihsmuhaṭa'*KI. Some horses are greasy color. Pottery may deserve the designation if the firing is unsuccessfully accomplished. A mountain familiar to some Papago is Greasy mountain, *muhaṭa'*KI *to'a'*KI.

*Red. cahswe'*KI, almost red; *swe'ku*MI, reddish; *we'*KI, red; *sihswe'*KI, very red; *stcu'kema swe'*KI, very dark red. The Papago red is the color of the clay sediment which is used for paint. *we'*KI also means red paint. *swe'ku*MI, reddish, corresponds to several of our pinks. In songs, the evening is spoken of as

9: O'Neale & Dolores E, I-4 (no date) 1943
NU28 Papago NU28

*swe'ku*MI. *sicu'keme swe'*KI and *sevale'kame swe'*KI are both dark reds. The former is a blackish red while the latter is a wet red which looks black. Either color designation applies to the color of a horse, but the difference in meaning is understood. 822

The rain clouds in the west are *we'pe'*KI, *iceva'* KI red clouds.

Yellowish-Red (corresponds to our orange-red). *soamma swe'*KI, yellowish-red. This name was applied to two colored papers, one a dark shell pink, and one a bright scarlet, again illustrating the fact that neither value nor purity relationships are necessarily implied by the color designation. In its duller and darker variations the color name may be applied to a horse. A pottery vessel after firing is often *soamma swe'*KI.

Yellow (corresponds to our orange). *cahsoa*ME, almost yellow; *oa*ME, yellow; *sihsoa*ME, very yellow. This "yellow" is similar to California poppy color, a yellow-orange or even pure orange. *oa*ME is also the name of a paint, and therefore applies to much duller or grayer hues than standard orange. A sick person may be spoken of as having a yellow or "deadlike" complexion:

mumu'ku KE *si'oamah*
(He is) sick and became very yellow.

*Green. cahsiceta'*KI, almost green: *siceta'*KI, green; *sihsiceta'*KI, very green; *sicu'kema siceta'*KI, very dark green. Grass is *siceta'*KI, the distant scene and the ocean are *cahsiceta'*KI (or they are *skoma'*KI, gray), but some of the materials bought at the store, according to the women's opinions, are *sihsiceta'*KI. To judge by the examples chosen from among the colored papers, the Papago color names for green cover not only several degrees of light, medium, and slightly darker values, but also hues to be found within the green, yellow-green, blue-green, and blue color groups.

The Indian use of the word green to describe objects which to other observers are blue has often been cited. The green leaves of the corn plant are *siceta'*KI *haha'*KE, and an ear of corn of the blue kernel variety is also green, *siceta'*KI *hu*NI. Yet the two colors are not assumed to be identical, and no Papago would misunderstand the use of the color name in the last instance. *siceta'*KI may apply to objects which are varying degrees of bluish gray. A horse of that rather indefinite color is spoken of as being *sicete'kime'skoma*KI, gray-with-some-green-in-it, our greenish-gray. Of course, by comparison with grass or leaves, no horse is green to the Papago, but the usual word incorporates *siceta'*KI in its formation. A blue shirt, unmistakably a cobalt blue to one of the authors, was called *skoma'kime siceta'*KI, grayish green, equivalent to saying green-with-some-gray-in-it. 151 822

There are few objects aside from growing things which necessitate the use of green to describe them. In the old days nothing was dyed or painted green, nor was the color found among Papago basket materials. There are occasional green design motives in the modern baskets because the centre leaves of one of the plants used can be so cured as to preserve their color.

9: O'Neale & Dolores E, I-4 (no date) 1943
NU28 Papago NU28

822 *ipahı* color (corresponds to our purple-red). *cahsipaima'*KI, almost *ipahı* color; *ipaima'*KI, *ipahı* color; *sihsipaima'*KI, very much *ipahı* color. *ipahı* is the name of the prickly pear plant, as well as of its fruit. *mah* is the verb to give. The combination means to give the color of the fruit to something. *ipahı* is similar to dark cerise or crimson.

[386 822 The juice of the *ipahı* fruit, which appears somewhat lighter when dry, is one of the most easily obtained paints for coloring the feathers on arrows. In addition to its availability, the juice can be used just as found.

177 822 192 *Color designations of Spanish origin used by the Papago.*— The group of color terms in this section are generally applied to the animals which were brought in by the Conquerors. Determining clear meanings for these adopted words has not been a simple matter, nor can the authors be certain that they always have had the same ideas in mind. Comparable difficulties are encountered in attempts to differentiate the characteristic appearance of surfaces to which the English words flecked, pied, mottled, splotched, or dappled are applicable.

Some of the Papago-Spanish equivalents are obvious.[4] It is essential to recognize that *l* and *r* are frequently confused, and that *b* and *v* are interchangeable, especially in phonetic spellings.

The following compilation of terms includes those in common usage among the Papago:

alihcani, sorrel. (Sp., *alazan*, sorrel-colored.) Applied to horses.

kaniloh, roan. (Sp., *acanelado*, cinnamon-colored. If the unaccented initial vowel and the intervocalic *d* are dropped, the equivalence seems clear.) Applied to horses.

lihsintoh. (Sp., *retintado* (?), retinted.) If two colors are evident, but one of them has the appearance of having been painted over the other, the effect is called *lihsintoh*. Applied to horses. When the color spots have more distinct outlines, the designation *pintoh* describes the effect.

pintoh. (Sp., *pintado*, painted, spotted, mottled.) To the Papago, this word means two colors, but it is necessary to mention which two, since no indication is contained in the word itself.

savinoh. (Sp., *sabino*, a mixed white and chestnut color. Applied to horses and mules.) The Papago apply this term to a dappled buckskin horse.

su'kelahtoh, one of the browns. (Sp., *chocolate*.) Applied to dogs.

valihsah. (Sp., *barcino* (?), ruddy, approaching redness. A word regularly applied to cows, bulls, dogs, etc.) As the Papago apply this word to cows it does not mean a single color, but a mixture of colors which produces a spotty effect. *valihsah* is always used in combination with some color name indicating that that color predominates, or is most noticeable. *valihsah* is similar to our mottled, a word which in itself only describes an appearance, and one which requires a phrase "with green," "with

[4] The authors are indebted to Professor Beatrice Cornish of the Spanish Department, University of California, for helpful suggestions and aid in checking possible Spanish equivalents for Papago color terms.

9: O'Neale & Dolores E, I-4 (no date) 1943
NU28 Papago NU28

blue," etc., to clarify the meaning. *valihsah* can be used with black (*stcu'kema svaliksaṭa'*KE), with yellow (*soamah sva'ihsaṭa'*KE), and with red (*swe'himah svalihsaṭa'*KE), to describe a mixed color effect. Other grammatically possible combinations would seem senseless to the Papago as, for instance, a mixed color effect in which white predominated, (*stohama svalihsaṭa'*KE). Such a combination probably would be called gray (*skoma'*KĬ).

vayoh. (Sp., *albino* (*?*).) This name is given to different colors, some of them almost white. Applied to horses.

wuiloh. (Sp., *albino* (*?*).) Applied to horses that are white. If the Papago word is from the Spanish albino, it may refer to the color of the eyes. Some very white horses have peculiar eyes. When an Indian has trouble with his eyes, he is sometimes joked about their appearance. No Indian could be the same color as the horses to which *wuiloh* applies, but no matter how dark his skin, his eye trouble makes him *wuiloh.*

To sum up: Papago color designations indicate a limited need for color terminology in their everyday life. They seem to reveal, in addition, a rather obvious lack of what has been called nature appreciation in terms of color. A few of the examples cited to aid in the identification of a color designation were chosen from natural phenomena, but the fact that the majority of words apply to the color of horses and cows suggests the comparatively late development of color consciousness. Dolores believes that growth in this direction is the result of education and the increased availability of colored objects and materials.

There are several descriptive color names on the Papago list. It includes ashen, muddy, smoky, and greasy colors, but no combination equivalent to leaf or grass green, *ipahi* red, sky gray, or poppy yellow. Our word green, for example, covers hundreds of inter-gradations. These require for their identification not only modifiers like olive green or mustard green to show the preponderance of the blue or yellow hue constituents, but also various other modifiers which by analogy indicate relative degrees of value and purity. Parrot green, lettuce green, emerald, bottle, sea, oasis are typical examples of designations inspired by professional stylists. The more simple the system of color terminology, the greater the necessity that each designation be adequate to cover a range of differences in value and purity and that the term be sufficiently flexible to permit extensions of meaning.

The Papago recognise light colors in the formation of their designations by prefixing *cah-* meaning a little like, or almost. They also use a modifier to indicate the dark or blackish colors, and although they have no separate term connoting the brightness, purity, or intensity of a color, their prefix *sih-* in most instances identifies a hue as nearly pure. The majority of the Papago color designations, however, emphasize the value or light-to-dark variations.

UNIVERSITY OF CALIFORNIA
BERKELEY, CALIFORNIA